

TRICHOPSOMYIA LUCIDA (DIPTERA: SYRPHIDAE): AN ADDITION TO THE BRITISH LIST, AND ITS SEGREGATION FROM RELATED SPECIES

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Abstract

Trichopsomyia lucida (Diptera: Syrphidae) is added to the British list, based on a recent specimen collected in London. A key is provided for its segregation from other European *Trichopsomyia* species. Available information about *T. lucida* is summarised.

Introduction

Three European species are consigned to the syrphid genus *Trichopsomyia*. One of these, *T. flavitarsis* (Mg.) is a recognised component of the British fauna, and has been for a long time. There has been confusion over the identity of one of the other species, finally resolved by Goeldlin (1997), who introduced the name *joratensis* Goeldlin for it, having established that the name *carbonaria* (Mg.), commonly-used for it previously, applied to a species belonging to a different genus. At Verrall's time (Verrall, 1901), both *T. joratensis* (as *Pipiza carbonaria*) and the third European *Trichopsomyia* species, *T. lucida* (Mg.) (as *Pipiza lucida*) had been included as British species by earlier authors. Verrall (1901) acknowledged the existence of these earlier references, but stated that he did not recognise *T. joratensis* as British. His treatment of *T. lucida* is ambiguous, in his section on "Reputed British Syrphidae" simply commenting that the species was "recorded by Stephens and others". In his treatment of *T. flavitarsis* (as *Pipizella flavitarsis*) he includes comment on his examination of the type material of *T. lucida*, making it clear that his concept of the latter species was of *T. lucida* as it is known today. He included neither *T. joratensis* nor *T. lucida* in his keys. If there were pre-Verrallian records of either species from Britain they have never been verified. Since then, neither *T. joratensis* nor *T. lucida* have been referred to as British species or included in keys to the identification of British syrphids.

***Trichopsomyia lucida* in Britain**

During course of some rather casual syrphid collecting in the Abney Park Cemetery Nature Reserve, Hackney, London (Middlesex: VC 21; O.S. grid reference TQ 333868), on 2 August 2006, I came across a female of *Trichopsomyia lucida*. The spot where the specimen was found exhibited no features that might suggest the presence of habitat conditions unlikely to be repeated elsewhere within the Thames basin, or further afield in southern England, and it would be surprising if this urban site is the only British locality where the species occurs. However, if *T. lucida* has been collected elsewhere in the British Isles, it is unlikely that it would be recognised as a *Trichopsomyia* species by anyone using the most recent British syrphid identification literature. In the keys to genera given by Stubbs & Falk (1983)

and Ball et al (2002), *Trichopsomyia* is segregated from related genera by means of a venational character that, in *T. lucida* (wing figured by Verlinden, 1991 and van Veen, 2004), takes almost exactly the form figured there for *Heringia* and *Pipiza*, ensuring that *T. lucida* could not be recognised as a *Trichopsomyia* species. The likely outcome of trying to identify *T. lucida* by means of those keys is that it would run first to *Pipiza* and then (with some difficulty, since the wings are not infuscated) to *P. lugubris* or *P. noctiluca*. It would not correspond sufficiently closely to either *P. lugubris* or *P. noctiluca* to give much confidence in the determination obtained, but re-examination of British material consigned to these species might provide more British records of *T. lucida*.

A character that can be reliably used to segregate the genus *Trichopsomyia* in keys (and the character upon which the status of *Trichopsomyia* as a distinct genus is most dependent) is the presence of long hairs on the anterior, flat part of the mesopleur (usefully figured by Coe, 1953), these hairs being absent from this sclerite (mesanepisternite 1 of Speight, 1987; anterior anepisternum of Thompson and Rotheray, 1998 and Van Veen, 2004) in other European genera of Pipizini (except *Triglyphus*). These hairs can easily be seen in *T. lucida*. Insertion of a couplet using this feature, to segregate *Trichopsomyia* from the other Pipizini, after couplet 3 in the key provided by Ball et al (p.150) should ensure correct generic level recognition of all three European *Trichopsomyia* species. Alternatively, the key to genera provided by van Veen (2004) is also reasonably accessible and could be used for recognition of putative *Trichopsomyia* specimens. Keys differentiating the three European *Trichopsomyia* from one another are given in English by both Goeldlin (1997) and van Veen (2004). The key offered below is based on those sources.

Key to *Trichopsomyia* species

1. Males (eyes meeting above the antennae)2
 — females (eyes separate throughout).....4
2. Antennal segment 3 at least 2x as long as its maximum depth; maximum width of the face (in anterior view) no greater than the maximum width of an eye.....3
 — antennal segment 3 no more than 1.5x as long as its maximum depth; maximum width of the face c.1.5x the maximum width of an eye
*joratensis* Goeldlin (male)
3. Posterior cell of wing (cell r5 of Ball et al, 2002) ending apically almost in a right angle; antennal segment 3 approximately 3x as long as its maximum depth
*flavitaris* (Mg.) (male)
 — posterior cell ending apically in a distinctly acute angle; ant.seg. 3 no more than 2x as long as its maximum depth*lucida* (Mg.) (male)

4. At the level of the antennal insertions the face (in anterior view) is no wider than an eye at the same level; hairs on hind tibiae including some longer than the width of the tibia5
- at the level of the antennal insertions the face is approximately 1.5x as wide as an eye at the same level; hairs on hind tibiae shorter than the width of the tibia (frons without dust spots; hind tibiae almost entirely black-haired; posterior cell ending apically almost in a right angle)*joratensis* (female)
5. Hind tibiae black-haired; posterior cell ending apically almost in a right angle; frons without dust spots*flavitaris* (female)
- hind tibiae silver-white haired; posterior cell ending apically in a distinctly acute angle; frons with a pair of distinct, silvery-grey dust spots*lucida* (female)

Trichopsomyia lucida (Meigen), 1822

This species is known in Europe from the Netherlands and Germany southwards to the coast of the Mediterranean and through central and southern Europe to Turkey. Its occurrence in Britain is thus not surprising, perhaps, even if it does not appear among species predicted to occur (Speight, 2000). However, records from Belgium (Verlinden and Decler, 1987) and the Netherlands (NJN, 1998) are scattered and few, except for a cluster in Limburg. Its habitat might best be described as tall herb communities along thermophilous forest fringes, and tall-herb open areas within deciduous forest, on well-drained soils. The 32 hectares of Abney Park Cemetery has a network of wide footpaths within woodland. The *T. lucida* specimen was collected flying among nettles (*Urtica*) at the side of a foot-path that is kept clear by periodic cutting of marginal vegetation, fronting mature ash (*Fraxinus*) woodland also containing a scattering of various exotic trees and with an understorey of shrubs like bramble (*Rubus fruticosus*) and elderberry (*Sambucus nigra*). The plant-list for the path-edge flora includes a variety of tall herbs, like *Arctium*, *Centaurea*, *Cirsium*, *Epilobium*, *Solanum* and various umbellifers (K. Byers, pers. comm.). The site is well-drained and there is no permanent, standing or running water. *T. lucida* is quite small for Pipizini, with small specimens no larger than the smallest *Heringia* (*Neocnemodon*), and it skulks among tall herb vegetation that is in the sun, flying between the stems with a rapid, zig-zag motion – an activity that seemingly ceases before mid-day. If the situation in Britain is as elsewhere, two generations per annum would be expected, the one on the wing May/June, the second in July/August. The male is narrow-bodied and drab, with a charcoal-grey, matt, unmarked abdomen. By contrast, the female normally has a pair of rather angular, brightly-orange marks on the second tergite, which is highly polished and undusted. These markings (their general appearance can be seen in the figure provided by Verlinden, 1991, and repeated in van Veen, 2004) are sufficiently distinctive to allow recognition of the species in the field. Flower-visiting data are limited, but it has been found at flowers of *Rubus fruticosus* agg and *Verbascum*. The developmental stages remain unknown.

Unlike *T. lucida*, *T. joratensis* is a species of humid forest, occurring among tall-herb vegetation of flushes, or along streams and small rivers, or humid track-sides, in humid beech (*Fagus*) forest. It is known from Fenno-scandia southwards into central Europe, where it is not infrequent in the beech forests of the Alps. A comprehensive account is provided for this species by Speight (2006).

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